Using Computer Wargames To Train at the Co/Tm Level

by Captain Darren P. Fitz Gerald and Captain James E. Ward

The use of simulations as a training tool for military operations has grown rapidly in the past decade. These simulations, often referred to as "wargames" or "battle simulations," have leapt from simplistic board games to highly technical and accurate computer simulations which realistically portray hand-to-hand combat; tactical, operational, and strategic level planning and execution; as well as real-time employment of combat forces, ranging from the individual soldier to the theater level. The industry has succeeded in incorporating the capabilities and vulnerabilities of our modern military equipment — as well as the human elements of morale, experience, and leadership — in an inexpensive, low-level unit trainer, the computer wargame. This article describes how commercial computer wargames might be used at the company/team level as an additional or alternative training tool and to address the feasibility of fielding commercial wargames for training soldiers at company level and below.

The Army's primary simulation development organization is the U.S. Army Simulation, Training, and Instrumentation Command (STRICOM). STRICOM, which along with the Naval Air Warfare Center Training Systems Division, provides the military services with realistic training simulations for many different military platforms and levels of training. On the whole, STRICOM has succeeded, providing excellent simulations such as MILES, UCOFT, Janus, SIMNET, BBS, as well as the battlefield tracking system for CMTC (CMTC-IS), which tracks and records vehicle movement and records the battlefield for after-action reviews.

However, there is a gap in the training tools available to soldiers at company level and below. While STRICOM has developed excellent trainers that provide quality training to soldiers, they are usually corps- or post-level resources not available to company-level trainers on a daily basis. While STRICOM has over 300 simulations either in existence or in development, existing commercial computer wargame simulations may fill the void that currently exists for simulations at the company, platoon, and squad level.

Two of the computer wargames currently available that can be used to train at the company/team level are *Steel Panthers II*, from SSI, and *TacOps*, from Arsenal Publishing. Both are ground warfare simulators employing a modern database of weapons and equipment in an effort to accurately depict modern tactical combat.

Steel Panthers II allows you to portray any of the major military powers and contains virtually all of the equipment fielded from the end of World War II to today. The game's strengths lie in its graphics and sounds, providing the user with detailed icons for each piece of equipment and accurate battlefield sound effects. Another strength of *Steel Panthers II* is the flexibility of its battle editor. The user can create his own maps, orders of battle, and tactical situations, as desired. One drawback to *Steel Panthers II* is that its reliance on "turn-based" play — where one player moves and/or shoots all of his equipment and then the other player, or computer, does the same — does not accurately depict the fluidity of the modern battlefield.

The designers of *TacOps* felt their game could succeed on its own as a simulation without the eyewash of fancy graphics, sounds, and animations. In *TacOps*, the user plays as either the U.S. Army, U.S. Marine Corps, or Canadian forces versus various opposing forces. *TacOps* provides a detailed online database of weapons and equipment and includes tables of hit and penetration data for various weapons and ranges. *TacOps* also comes with an editor (although not a map editor), allowing the user to customize any of the game's scenarios as needed. TacOps, however, does not use a standard "turn-based" system for resolving combat. Instead, each player enters his orders for a turn and they are then executed simultaneously, allowing for a more realistic approach to the sequence of events in combat.

By using the respective game's scenario/battle editors, each may be used to simulate any number of tactical situations at the CO/TM level. As an example, consider the breaching of a tactical obstacle. Prior to going to the field for CO/TM lane training, a company commander can use the game as a walk-through rehearsal of the breaching operation. He can create or load a map that represents the nature of the terrain his unit is preparing to train on, and then he can create an order of battle representing the task organization of his CO/TM. Additionally, he can also dictate the composition and disposition of the OPFOR and the layout of the obstacle for the scenario. Once the commander has set up his initial scenario, he has several options on how to execute the computer rehearsal. He and his platoon leaders can

Estimated Comparison

	Computer Wargames	Janus	SIMNET
Cost	$40-$50/Copy	$$$	$$$
Training Level	CO/TM/PLT/SQD Individual	BN/BDE	BN/CO
Controlling Agency	CO/TM Cdr	Post/Corps thru Division	Post/Corps thru Division
Frequency	Daily	Annually	Event driven
Realism	Computer Icons	Computer Icons	Actual crew Positions

play the part of the BLUFOR and allow the computer or the XO to play the part of the OPFOR, or, he can play the OPFOR while his platoon leaders execute their tasks.

For the following example, the commander will play the part of the OPFOR while his platoon leaders execute the mission, allowing him to control and adjust how the OPFOR may influence the battle, based on the performance of his platoon leaders. As the simulation begins, the platoon leaders maneuver their platoons, analyzing the terrain through what they can see on screen, as well as through the game options that depict lines of sight and cover and concealment.

Once the lead platoon makes contact with the obstacle, the commander has the option to use his OPFOR to engage immediately or wait until the breach begins. The lead platoon leader picks an appropriate piece of terrain from which to provide suppressive fire, and uses the game's indirect fire system to call smoke between the obstacle and the OPFOR. The smoke in the game will obscure enemy observation and line of sight, allowing the breach force to move forward and begin breaching the obstacle.

As the breach force negotiates the obstacle, the game incorporates an appropriate delay to simulate the time needed to breach the obstacle, throughout which the support force must continue to use direct and indirect fire to suppress the enemy on the far side of the obstacle. By comparing the armor protection of individual vehicles against the lethality and accuracy of the weapons firing at them, and subsequently incorporating the distance and obscuration on the battlefield, the game makes a realistic prediction of which shots will hit, miss, damage, or destroy the vehicles at which they are shooting.

Upon breaching the obstacle and establishing security on the far side, the assault force moves through the breach lane and assaults the remaining enemy on the far side of the obstacle. The assault force must employ sound fire control and distribution techniques in order to defeat the OPFOR controlled by the company commander. Again, the simulation calculates the hit probability for both OPFOR and BLUFOR and delivers realistic results as the assault force closes with the enemy.

Neither simulation forces you to fight doctrinally, however, the commander can require his platoon leaders to follow the principles of war and apply the breaching fundamentals in order to train those

concepts. Additionally, dependent on the commander's training objectives, he can run as many iterations of this same scenario as necessary, subtly altering it each time in order to achieve his goals. This breach mission is only one example of how these computer wargames may be used. They also have the capability to model other offensive and defensive missions, as well as meeting engagements.

Some of the benefits of using computer wargame simulations are that they provide a realistic model integrating enemy and friendly BOS capabilities. They also allow the trainer great flexibility in determining which tasks and scenarios he wants to train. Although the wargames mentioned above do not have any computer network play capability, there are computer wargames that do. Network play would allow for multiple force-on-force missions and training scenarios played from different computer terminals. Another advantage of commercial wargames is that there is already a system in place, through STRICOM, for the acquisition of commercial wargame simulations. Acquisition and funding for these wargames could be handled much as other computer software already is: at battalion and company level. Because the unit cost for these simulations is roughly $40-$50, with approval from higher headquarters, a battalion could local purchase copies of these simulations for use at the CO/TM level.

Although these computer simulations are a great training tool, they are far from perfect. One disadvantage of procurement of these simulations is that the start-up costs would be seemingly high. Also, most of the better simulations require Pentium computers, and the Army still has many, many 386 and 486-based personal computers. From the tactical perspective, there are weaknesses to using these simulations as trainers: some simulations do not accurately portray OPFOR doctrine, some allow varied degrees of command and control, and others ignore control of logistical support functions.

From the example provided above, it is evident that these computer simulations can effectively be used beyond the scope of amusement as a tool to develop tactical skills. The simulations allow small-unit leaders to experiment with new techniques and procedures, and also can provide an opportunity to practice and rehearse repetitive, complicated tasks before deploying to the field environment. No simulation is meant to be totally realistic, as evidenced in the STRICOM motto "All That Is Not War is Simulation," which applies even to maneuver training in the field. However, use of these simulations is not intended as a substitute for maneuver training, but as a supplement. An adept leader will be able to overcome these shortfalls and adapt the simulation to fit his planned training objectives. Finally, these computer wargames do provide CO/TMs an organic training tool that can be easily understood and enjoyed by all soldiers.

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